

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference SDF-5321PCT	<b>FOR FURTHER ACTION</b> See item 4 below	
International application No. PCT/JP2005/006411	International filing date ( <i>day/month/year</i> ) 25 March 2005 (25.03.2005)	Priority date ( <i>day/month/year</i> ) 31 March 2004 (31.03.2004)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant SHOWA DENKO K.K.		

1.	This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).	
2.	This REPORT consists of a total of 7 sheets, including this cover sheet.  In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.	
3.	This report contains indications relating to the following items:	
	<input checked="" type="checkbox"/> Box No. I	Basis of the report
	<input type="checkbox"/> Box No. II	Priority
	<input type="checkbox"/> Box No. III	Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
	<input type="checkbox"/> Box No. IV	Lack of unity of invention
	<input checked="" type="checkbox"/> Box No. V	Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
	<input type="checkbox"/> Box No. VI	Certain documents cited
	<input type="checkbox"/> Box No. VII	Certain defects in the international application
	<input type="checkbox"/> Box No. VIII	Certain observations on the international application
4.	The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).	

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland  Facsimile No. +41 22 338 82 70	Date of issuance of this report 04 October 2006 (04.10.2006)
	Authorized officer  Yoshiko Kuwahara  e-mail: pt07@wipo.int

# PATENT COOPERATION TREATY

REC'D 20 JUL 2005

WIPO

From the  
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:



see form PCT/ISA/220

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing  
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference  
see form PCT/ISA/220

**FOR FURTHER ACTION**  
See paragraph 2 below

International application No.  
PCT/JP2005/006411

International filing date (day/month/year)  
25.03.2005

Priority date (day/month/year)  
31.03.2004

International Patent Classification (IPC) or both national classification and IPC  
A61K7/48

Applicant  
SHOWA DENKO K.K.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1 (a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

### 2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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Authorized Officer

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Telephone No. +49 89 2399-6050



**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/JP2005/006411

**Box No. I Basis of the opinion**

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
  - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material:
    - ☐ a sequence listing
    - ☐ table(s) related to the sequence listing
  - b. format of material:
    - ☐ in written format
    - ☐ in computer readable form
  - c. time of filing/furnishing:
    - ☐ contained in the international application as filed.
    - ☐ filed together with the international application in computer readable form.
    - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY**

International application No.  
PCT/JP2005/006411

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**Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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**1. Statement**

Novelty (N)	Yes: Claims	3
	No: Claims	1-2,4-7
Inventive step (IS)	Yes: Claims	
	No: Claims	1-7
Industrial applicability (IA)	Yes: Claims	1-7
	No: Claims	

**2. Citations and explanations**

**see separate sheet**

**Re Item V.**

- 1 Reference is made to the following documents:

D1 : XP002333461  
D2 : XP002333462  
D3 : US 6 586 588 B1  
D4 : WO 02/33034 A  
D5 : JP 11 180818 A  
D6 : XP009049312  
D7 : JP 08 041104 A  
D8 : XP002072527

2 INDEPENDENT CLAIM 1

- 2.1 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT. Document D1 discloses a cosmetic emulsion containing 5% LaraCare A200 and providing moisturization to the skin (p.1). This additive is also known as galactoarabinan (p.2) which is a highly branched polysaccharide (D2 Lärchengummi Typ II figure b). One manner of defining polysaccharides is given in D3 (col.2, l.50-54, 59-62; col.3, l.48, 49, 61). According to this definition galactose and arabinose are the anhydrosugar units for LaraCare A200. Moreover, branched and multi-branched are equivalent terms as multi is a vague prefix which can not be relied upon to distinguish the claimed invention from the prior art (PCT Guidelines 5.34). D1 is therefore considered to be prejudicial to the novelty of not only claim 1 but also claims 2 and 4 to 7.
- 2.2 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT. Document D4 discloses (ex.1) a detergent composition containing 1wt% of carboxymethyl guar as anionic polysaccharide (p.15, l.24-27). This polymer is described (p.2, l.16-30) as having anhydrohexose units in the backbone and anhydropentose and/or anhydrohexose units in the branches. A cosmetic use as external preparation for the skin is not disclosed. The detergent composition is

nevertheless suitable for such a use (PCT Guidelines 5.21) and therefore anticipates the subject-matter of claims 1, 2 and 4 to 7.

- 2.3 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT. Document D5 discloses (PAJ abstract) a skin preparation for external use containing glycogen or amylopectin as branched polysaccharide. A similar reasoning as in §2.1 leads to the conclusion that claims 1, 2 and 4 to 7 lack novelty with respect to D5.
- 2.4 The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT. Document D6 discloses (top right col. p.84) a moisturizing solution containing 0.4% LC-Glucan which is a  $\beta$ -(1,6)-branched  $\beta$ -(1,3)-glucan (bottom right col. p.80). A similar reasoning as in §2.1 leads to the conclusion that claims 1, 2 and 4 to 7 lack novelty with respect to D6.
- 3 DEPENDENT CLAIMS 2-7
- Dependent claims 2-7 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT):
- 3.1 Dependent claims 2 and 4 to 7 lack novelty with respect to D1, D4, D5 and D6 (see reasoning under §2).
- 3.2 Dependent claim 3 can not be considered as involving an inventive step in the sense of Article 33(3) PCT with respect to D6 to D8. It is known from D6 and D8 that immunity activation of glucans results in moisturizing properties. It is therefore not surprising that the polysaccharides according to present claim 3, which are known to be immunity activating (D7 cl.8, §16), are moisturizers. The comparative examples in the present application compare the moisturizing polysaccharides according to present claim 3 to compounds such as glycogen, glycine, xanthan gum (known as skin-conditioners in the CTFA Handbook) and hydroxyethylcellulose (known as film-former in the CTFA Handbook) which are not conventional moisturizers.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/JP2005/006411

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International application No.  
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### 3 DEPENDENT CLAIMS 2-7

Dependent claims 2-7 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step (Article 33(2) and (3) PCT):

3.1 Dependent claims 2 and 4 to 7 lack novelty with respect to D1, D4, D5 and D6 (see reasoning under §2).

3.2 Dependent claim 3 can not be considered as involving an inventive step in the sense of Article 33(3) PCT with respect to D6 to D8.

It is known from D6 and D8 that immunity activation of glucans results in moisturizing properties. It is therefore not surprising that the polysaccharides according to present claim 3, which are known to be immunity activating (D7 cl.8, §16), are moisturizers. The comparative examples in the present application compare the moisturizing polysaccharides according to present claim 3 to compounds such as glycogen, glycine, xanthan gum (known as skin-conditioners in the CTFA Handbook) and hydroxyethylcellulose (known as film-former in the CTFA Handbook) which are not conventional moisturizers.

**WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING  
AUTHORITY (SEPARATE SHEET)**

International application No.

PCT/JP2005/006411